

REMARKS

Claim 20 was objected to by reason of the appearance of number 50 next to different elements of the claim. By the foregoing proposed amendments to the claims, the Examiner will please note that all numeral references have been eliminated from the claims, including those within claim 20. This objection is therefore believed to be moot.

Claims 17-28 and 30 have been rejected under 35 U.S.C. §102(a) as being anticipated by Chioffi (EP0965677), and claim 29 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Chioffi (EP0965677) in view of Ostdielk (US6036241). For the reasons that follow, Applicants traverse these grounds for rejecting claims 17-30, and argue against the application of these prior art references against newly proposed claims 31-36.

Applicants respectfully point out that, inter alia, the problems of the door lock according to EP'677 have motivated the Applicants to seek for improved solutions concerning an emergency release of a household appliance door lock in case of a failure or abnormal operation of the household appliance. Applicants' efforts have resulted in the present invention.

The door lock according to EP'677 comprises a bimetal arrangement 8 (figure 3). The bimetal arrangement 8 blocks the door lock. Heating of bimetal arrangement 8 effects movement of a locking member 13 into a position in which locking member 13 blocks movements of a retaining slider 4 (figure 7). Due to the blocking of retaining slider 4, a hook member A cannot be retracted or unlocked (figure 5). As a result, the closed household appliance door is latched.

Opening of the door locking according to EP'677 is not effected by bimetal arrangement 8. Rather, opening is effected by an actuator arrangement 19 and a lever 16 (figure 2). Actuator arrangement 19 moves lever 16 such that locking member 13 is engaged and moved out of the position that prevents movements of retaining slider 4 (figure 9). Moving locking member 13 out of this position effects a release of retaining slider 4. As a result, hook member A is also released, hook member A can be unlatched and the household appliance door can be opened.

In case of a failure of the household appliance (i.e., an abnormal operating state in terms of the present invention, such as a power failure), actuator arrangement 19 cannot be actuated to operate lever 16. As a result, the door lock according to EP'677 cannot be released in that way. In such a case, release of the door lock (i.e., an emergency release) is effected by bimetal arrangement 8. Due to the failure, bimetal arrangement 8 is not heated any longer whereby bimetal arrangement 8 assumes its state illustrated in figure 3. As a result, locking member 13 is also moved back whereby retaining slider 4 is released and the household appliance door can be opened.

From this description of the operation of the door lock according to EP'677, it is apparent that this door lock comprises an integral blocking and emergency release unit comprising bimetal arrangement 8 and, as separate unit, a release unit comprising actuator arrangement 19 and lever 16.

In contrast thereto, the door lock according to the present invention comprises an integral blocking and release unit and, as a separate unit, an emergency release unit. For a more detailed comparison between the features of the present invention as

claimed and EP'677, please refer to the attached observations demonstrating novelty of the claims.

As regards the inventive step of the present invention in view of EP'677, it has to be noticed that the door lock according to EP'677 employs bimetal arrangement 8 to provide the blocking function. However, an ordinarily skilled person would not have modified the door lock according to EP'677 such that bimetal arrangement 8 also provides the release function during normal operation of the household appliance. Release of the door lock will be desired at the end of an operating cycle, allowing a user to open the household appliance door virtually immediately after operation cycle end. This is impossible by means of bimetal arrangement 8 used as releasing means because cooling down bimetal arrangement 8 takes a certain time, which is contradictory to a quick opening of the door. Even assuming a skilled person would have contemplated such a modification, the teaching of EP'677 deters the skilled person from doing so. It is an explicit object of EP'677 to allow "a user to open the door quickly, that is without having to wait" (see EP'677: column 1, lines 54-57). As a result, the preceding modification of bimetal arrangement 8 would be diametrically opposed to the teaching of EP'677 and, thus, not obvious for an ordinarily skilled person.

Further, it has to be noted that an ordinarily skilled person would not have replaced bimetal arrangement 8 by a different actuator to allow a fast door opening because using bimetal arrangement 8 for locking the door provides a user-friendly feature. Heating of bimetal arrangement 8 will take a certain time until the door lock is actually locked by locking member 13. This period of time can last up to a few minutes

and allows opening of the household appliance door although an operation cycle has already been started.

For example, in case of a washing machine, this enables a user to re-open the washing machine door after start in order to add further clothes to be washed. This feature of the door lock according to EP'677 does not represent a problem in front loading washing machines because filling water into the washing machine requires more time than actually locking the door lock; even if some water is already filled into the washing machine, the water level will be too low that water can get out of the washing machine through its open door. This is, technically speaking, not very precise, but is very user-friendly and is commonly known to ordinarily skilled persons. In order to maintain this feature usually expected by "experienced" washing machine users, an ordinarily skilled person would not have replaced bimetal arrangement 8.

Moreover, it has to be noticed that modifications of bimetal arrangement 8 towards an integrated locking and release unit along the lines of the present invention mandatorily leads to a complete redesign of the door lock according to EP'677. Assuming the above modification of bimetal arrangement 8, the release unit according to EP'677 must be modified to provide an emergency release function. However, releasing the door lock according to EP'677 requires the above-described movement of lever 16. This movement requires actuation of actuator arrangement 19. This actuation will, however, not be possible in an abnormal operating state of the household appliance, in particular in case of a power failure. As a result, the release unit according to EP'677 cannot be easily modified towards an emergency release unit.

Rather, a complete redesign of at least this portion of the door lock according to EP'677 will be necessary, efforts an ordinarily skilled person will regularly avoid.

As a result, EP'677 does not render obvious the present invention as claimed.

One of the benefits of the present invention is the fact that any failure concerning the emergency release unit will not effect the operation of the door lock of the present invention during normal operation. During normal operation, locking and releasing of the door lock is accomplished by the locking and releasing unit. These functions are provided irrespective of the operability of the emergency release unit. In contrast thereto, any failure concerning bimetal arrangement 8 of EP'677 as regards its emergency release function will effect its locking function and vice versa; any failure concerning bimetal arrangement 8 will lead to an overall failure of the door lock according to EP'677.

The Examiner has cited US-6,036,241 with respect to the dependent claim 29 only. Therefore, Applicants have refrained from providing any observations to this prior art, as claim 29 depends from claims 17 and 20, which are allowable over the prior art of record for the reasons already stated.

Respectfully submitted:

By Clifford W. Browning
Clifford W. Browning
Reg. No. 32,201
Woodard, Emhardt et al. LLP
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
(317) 634-3456

#267536